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ABSTRACT

In an effort to determine differences between the reading scores of students taught by a traditional basal approach and a more structured direct instruction approach, 31 problem readers from two first grade classrooms in a low income Southeastern rural community were examined and tested over a year-long period. The two groups were found to be approximately equal in pretest measures prior to treatment. At the end of the treatment period, the experimental group, which used the SRA Reading Mastery Series, demonstrated significantly higher achievement scores compared with the students using the basal reading curriculum, with differences occurring in word-identification, word attack, and total reading. One major factor contributing to the higher scores appeared to be the direct instruction curriculum used, which required no background knowledge or entry skills, and utilized a synthetic phonics approach to break all skills into small steps to be practiced. The second factor was probably the training and supervision that teachers in the experimental group received. Based on the results of the study, several recommendations are given. (Tables of data showing posttest results are included.) (MM)

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TEACHING READING TO LOW PERFORMING FIRST GRADERS: A COMPARISON OF TWO INSTRUCTIONAL APPROACHES

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Abstract

The objective of this study was to determine if there is a difference between the reading scores of students taught by two different methods--a traditional basal approach and a more structured direct instruction approach. The 31 subjects who comprised the two instructional groups were first graders in a rural school in the Southeast. They were found to be approximately equal on pretest measures prior to treatment. After a year of instruction, analysis of covariance and *t* tests revealed a significant difference in the two groups on the posttest measure with the direct instruction group scoring higher. Possible explanations for the difference are discussed and recommendations are made.

Teaching Reading to Low Performing First Graders:

A Comparison of Two Instructional Approaches

In this country the overwhelming majority of first grade classrooms use one of the major basal reading series. For a child from a home with parents having little formal education these basal series often assume too much in the way of background knowledge (Beck, McCaslin, & McKeown, 1981). This fact is of particular interest in isolated rural communities where program improvement has lagged behind larger districts (Nachtigal, 1982).

In the last two decades interest in rural education programs has been on the rise. As part of the national Follow Through Project beginning in 1967-83 by the U.S. Office of Education, innovative educational programs were provided to low income minority students in primary grades in a variety of communities. Because of the previous failure in Williamsburg County, South Carolina, to teach students basic academic skills in the primary grades, and the community's interest in upgrading instruction, representatives of the school board chose to affiliate with the Direct Instruction Model (Becker, Engelman, Carnine, Rhine, 1981). The model was designed to provide an innovative curriculum, increase the academic engaged time of the students who participated in the program, and increase the amount of time given to small group instruction. The results of the national evaluation (Stebbins, 1976; Stebbins, St. Pierte, Proper, Anderson, & Cerva, 1977) indicated that of the 80 projects evaluated around the country the Direction Instruction project in rural Williamsburg, South Carolina, was most effective.

The present study which compares the progress of two groups of students--one taught with the basal approach and the other taught with a direct instruction curriculum--was planned to extend the research that was

begun in South Carolina and possibly to replicate some of its findings relating to rural populations.

Method

Sample

The subjects for this study were 31 first grade students (19 male and 12 female, 1 white and 30 black) in a rural community in the Southeast. The school was situated in a low income area. In a county where the Stanford Achievement Test scores usually were at or slightly below the state average, students in this school typically scored much lower that the county average, especially in the reading and language areas.

The subjects were those students from the two first grade classrooms who were nominated by the regular classroom teachers as students who were having difficulty with reading and needed extra help. Those students who the teachers considered to be most in need of help were assigned to the experimental group with the remaining students being assigned to the comparison group.

In an effort to confirm group comparability, the groups were compared using the school abilities index from the Otis Lennon School Abilities Test and the Total Reading Score of the Woodcock Reading Mastery Test. A t-test between the means of the experimental (M = 99.067) and comparison groups (M = 94.250) on the Otis Lennon showed that there was no significant difference in the IQ means of the two groups, $t(25) = .690$, $p > .05$. A t-test on the means of the experimental (M = 28.059) and comparison groups (M = 34.546) on the Woodcock also showed no significant difference $t(26) = -1.710$, $p > .05$.

Teachers

The comparison groups were taught by the two regular first grade teachers. Both were experienced teachers having each taught 10 or more years. These teachers were given no additional training but were expected to teach the group as they normally would.

The experimental groups were taught by four masters degree students who were participating in a practicum at a nearby university. These teachers were specifically trained to implement the experimental program. Both groups received daily instruction for the entire school year.

Instructional Materials and Methods

The comparison groups were taught in two self contained first grade classrooms using the Houghton-Mifflin reading series which is the one adopted for use in the school system. Instruction was carried out daily in groups of approximately eight students.

The SRA Reading Mastery Series, which is designed for small group instruction, served as the instructional program for the experimental group. These students were taught in groups of five.

The Reading Mastery Series is radically different from the basal series used in this study in several respects. The materials are specifically designed with structured, scripted teacher presentation manuals. Nothing in the way of entry skills for the student is assumed. Students are taught every required academic skill--from left-right orientation to strategies for sounding out words and to comprehension and problem solving skills. Utilized is a synthetic phonics approach in which all skills are broken into small steps and opportunities for repeated practice are provided. The sequence of introducing new letter-sound correspondence is carefully

controlled according to research-based principles of curriculum design (Carnine & Silbert, 1979). For example, the teaching of sounds or symbols which students are likely to confuse, such as b and d, or i and e, is separated by several weeks. The rate at which new sounds are introduced is much slower than the readiness level of the basal series. Students are allowed as much time as necessary to learn each new sound before the next is introduced.

Students are taught to blend sounds together before they are required to sound out simple words. This practice in blending is emphasized to develop automaticity and to prevent one of the major reading problems students experience in the primary grades. Within several weeks, students begin reading simple stories and answering questions based on these stories.

The strategies and techniques used in teaching the experimental group were based on current research on maximizing achievement growth. They included: (a) teaching to mastery; (b) explicit step-by-step modeling of strategies; (c) systematic correction procedures, to enable the teacher to correct all errors effectively and efficiently and to transform student errors into positive learning experience; (d) frequent use of unison group responses; and (e) positive reinforcement and clear statement of rules and procedures.

Supervision and Staff Development

Throughout the year the teachers of the experimental groups received training in direct instruction teaching and remediation strategies. These sessions were augmented by weekly classroom observations by the university supervisors as well as video taping of lessons. The video tapes were used to critique teaching skills as well as to document the intervention that was

taking place. The coaching model (Showers, 1984) was used--often the supervisor would take over the group for a brief period of time and model alternative teaching techniques. Following classroom observations, teachers were always given feedback, which included a discussion of aspects of successful teaching and specific recommendations for improvement. Provided was specific feedback about their performances on critical instructional behaviors such as pacing of lessons, feedback given to low performing students, and methods used to correct errors.

Measurement

All students, both comparison and experimental, were tested upon entry into the program, with the Woodcock Reading Mastery Test which includes subtests in the areas of letter identification, word identification, word attack, word comprehension, and passage comprehension. Students were again tested at the end of the school year with the alternate form of the Woodcock. The reading subtest of the Wide Range Achievement Test was used as an additional posttest measure.

Results

Significant difference between the adjusted posttest means on the Word Identification subtest of the larger measure was obtained as indicated in Table 1. The experimental group (M = 30.430) scored significantly higher than the comparison group (M = 17.070), F (1, 25) = 8.255, $p < .01$.

Insert Table 1 about here

Significant difference between the adjusted posttest means on the Total Reading scores of the Woodcock was obtained as indicated in Table 2. The

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Insert Table 2 about here

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experimental group ($\underline{M}$ = 97.510) scored significantly higher than the comparison group ($\underline{M}$ = 47.57), $\underline{F}$ (1, 25) = 28.240, $\underline{p}$ < .001.

Because all students had 0 scores on the pretest of the Word Attack subtest, analysis of covariance could not be used since this condition produced a singular matrix for main effect and covariates. Results of a $\underline{t}$-test revealed significant differences on the Word Attack posttest means for the experimental ($\underline{M}$ = 15.470) and the comparison ($\underline{M}$ = 1.000) groups, $\underline{t}(29)$ = 8.86, $\underline{p}$ < .001.

Discussion

The results of this study demonstrate significantly higher achievement scores for the experimental group which was taught with the direct instruction curriculum as compared to the comparison students who were taught using the basal reading curriculum. This difference occurred in all areas measured--word identification, word attack, and total reading.

It is believed that two main factors contributed to the significantly higher scores of the experimental group. One factor that we expect contributed to the overall positive effect of the direct instruction intervention was the curriculum used. This program was radically different from the basal program. Some of the differences that we believe contributed were the degree of structure, the amount of practice provided, and the strong phonics emphasis.

The other contributing factor we feel was the extent to which the teachers of the experimental group were trained and supervised. The

teachers were explicitly taught to implement the Direct Instruction Teaching Model and were given specific feedback related to their teaching performance.

Recommendations

Based on this study and on results of work in other rural areas (Darch, Gersten, Taylor, in press), the following recommendations are made: Curriculum for high-risk rural students should be chosen very carefully. Care should be taken not to assume students have background knowledge or preskills that they do not have. Any unmastered preskills should be explicitly taught and practiced until mastery is achieved before going on to new skills. Teaching strategies that appear to maximize achievement growth for the student include a high degree of student engaged time, teaching to mastery, explicit modeling of strategies, systematic correction procedures, and frequent opportunity for the student to respond, to interact with the teacher, and to be given positive feedback and reinforcement.

Also recommended is staff development to help solve everyday problems that occur in the classroom. Careful assessment of student learning problems, carefully guided observations of classroom progress, and focused coaching would lead to more effective teaching (Showers, 1985).

References

Beck, I. L., McCasline, E. S., & McKeown, M. G. (1981). Basal readers' purpose for story reading: Smoothly paving the road or setting up a detour? Elementary School Journal, 81, 156-160.

Becker, W., Engelmann, S., Carnine, D. W., & Rhine, R. (1981). The Direct Instruction Model. In R. Rhine (Ed.), Encouraging change in America's schools: A decade of experimentation. New York: Academic.

Carnine, D. W., & Silbert, J. (1979). Direct instruction reading. Columbus: Charles G. Merrill.

Darch, C. B., Gersten, R., & Taylor, R. (in press). Evaluation of the Williamsburg County Direct Instruction Program: Factors leading to success in rural elementary programs. Rural Education Journal.

Natchtigal, P. M. (1982). Rural education: In search of a better way. Boulder, CO: Westview.

Showers, B. (1985). Teachers coaching teachers. Educational Leadership, 43, 43-48.

Stebbins, L. B. (Ed.). (1976). Education as experimentation: A planned variation model Vol. IIIA. Cambridge, MA: Abt.

Stebbins, L. B., St. Pierte, R. G., Proper, E. C., Anderson, R. B., & Cerva, T. R. (1977). Education as experimentation: A planned variation model. Vols. IV A-D. An evaluation of Follow Through. Cambridge, MA: Abt.

Table 1

Analysis of Covariance. Group Difference on Posttest Word Identification with Pretest Word Identification as the Covariate

Source of variance	Sum of squares	DF	Mean square	F	Significance of F
Covariates	2010.407	1	2010.407	14.189	.001
Main effects group	1169.570	1	1169.570	8.255	.008
Residual	3542.130	25	141.685		
Total	6722.107	27	248.967		

Table 2

Analysis of Covariance. Group Difference on Posttest Total Reading with Pretest Total Reading as the Covariate

Source of variance	Sum of squares	DF	Mean square	F	Significance of F
Covariates	7005.960	1	7005.960	13.218	.001
Main effects group	14967.933	1	14967.933	28.240	.000
Residual	13250.786	25	530.031		
Total	35224.679	27	1304.618		